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V.O

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

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ART UNIT	PAPER NUMBER
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2724

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DATE MAILED: 12/10/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/879,467

Applicant(s)

Durbin et al

Examiner

Wenpeng Chen

Group Art Unit

2724



☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-18 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-18 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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Drawings

1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-2, 4-6, 8-9, 12, 14, and 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Feng et al. (US patent 5,783,811).

Feng teaches a coded image capture and decoding system (column 7, lines 1-33) comprising:

-- an optical system that captures image data from coded targets; (column 10, lines 40-52)

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-- a first processing circuit, coupled to the optical system, that generates a plurality of images based on image data received from the optical system; (column 10, line 53 to column 11, line 39; comprising elements 256, 258, 260, 264, 316 of Fig. 13)

- wherein the first circuit performs proximity screening which detects the coded target and initiates capture cycling; (column 15, line 63 to column 16, line 5)

- wherein the first circuit converts the image data into a plurality of transition points; (column 12, 55-67; The black or white value is a transition point.)

-- an image buffer, coupled to the first processing circuit, that stores the plurality of images generated by the first processing circuit; (column 11, line 21 to column 12, line 9; comprising element 274 of Fig. 13)

-- a second processing circuit, coupled to the image buffer, that attempts decoding processing of the plurality of images after the plurality of images is stored in the image buffer; (column 12, lines 1-9 and 55-67; comprising elements 284, 286, 288, 290 of Fig. 13)

- wherein the second circuit constructs a composite image from the plurality of images for decoding processing; (column 12, lines 10-54; The original images are compensated to by composition to form a composite image for decoding process.)

-- a host processing circuit that performs decoding processing of coded images; (column 17, lines 18-30)

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- wherein the host processing circuit is selectively directed by the second (host) processing circuit, controlling the time at which decoding processing to be performed; (through the element 284 of Fig. 13)

-- interface circuitry that assists in delivering the plurality of coded images to the host processing circuit for decoding after the plurality of coded images have been stored in the image buffer. (the lines connecting the host processing circuit to the buffer in Fig. 13)

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 13, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feng as applied to claims 1, 8, and 17 above, and further in view of the admitted prior art (pages 3-6 of the present specification.)

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Feng teaches a coded image capture and decoding system as explained above. Feng further teaches:

- capturing multiple images with an operator depressing a trigger and repeating capturing an image and decoding if a decoding of a dataform fails; (column 15, lines 15-39; column 16, lines 28-62)

- a wireless radio to transfer captured images to a remote device. (Column 18, lines 29-43; column 20, lines 1-21)

However, Feng does not teach that (1) the number of the multiple images is predetermined and (2) the remote device can be explicitly a host processor.

The admitted prior art teaches

- a process in that a decoding sequence continues until either a coded image is successfully decoded, or a predefined number of failed decoding attempts occur; (page 3)

- multiple images are wirelessly transferred to a remote site for further processing. (page 4).

It is desired that a failed decoding process has to be ended after a predefined number of failed decoding attempts as taught by the admitted prior art to balance the trial time and probability of successful decoding. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply the teaching of the admitted prior art to the Feng's system to capture a predetermined number of images for decoding, because the combination balance the trial time and probability of successful decoding.

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It is further desired to have the capability of remote decoding and monitoring. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply the teaching of the admitted prior art to the Feng's system to send multiple images to a remote site wirelessly for decoding or monitoring, because the combination adds the additional capability as stated above.

6. Claims 7 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feng as applied to claims 1 and 8 above, and further in view of Park (US patent 5,675,424).

Feng teaches a coded image capture and decoding system as explained above.

Feng further teaches:

-- compressing the images before sending to a receiver. (Element 294 of Fig. 13A; column 13, lines 18-56)

However, Feng does not explicitly cite the reference image and difference recites in Claim 10.

Park teaches the MPEG compression method. (Abstract) The MPEG method is the most useful method for compressing a sequence of images. In the method, the first image is used as a reference and the differences between the reference and its subsequent images are derived. Both the reference and the differences are coded.

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It is desired to transfer data in an efficient compressed form to gain transmission speed. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply MPEG compression method to the Feng's system to compress image data, because the combination provides an efficient coding process.

Park further teaches a parallel decoding method. (Fig. 4; column 3, lines 14-39)

It is also desired to be able to use a low-speed decoder as well as high speed decoder to decode a dataform and images. As taught by Park, decoding in parallel with a set of decoders can speed up its overall decoding speed. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use parallel decoding in the Feng's system to decode dataform, because the combination expands the capability of the system by increasing process speed or allowing the use of low-speed processors.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wenpeng Chen whose telephone number is (703) 306-2796.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

The art unit fax number is (703) 308-5397.

Wenpeng Chen

November 23, 1998



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PATENT SECTION
FBI/DOJ

IMPORTANT NOTICE

Effective November 16, 1997, the Examiner handling this application will be assigned to a new Art Unit as a result of the consolidation into Technology Center 2700. See the forth coming Official Gazette notice dated November 11, 1997. For any written or facsimile communication submitted **ON OR AFTER November 16, 1997**, this Examiner (**Wenpeng Chen**), who was assigned to Art Unit **2616**, will be assigned to Art Unit **2724**. Please include the new Art Unit in the caption or heading of any communication submitted after the November 16, 1997 date. Your cooperation in this matter will assist in the timely processing of the submission and is appreciated by the Office.